Freeform Search 10/09/281

Database: US Pre-Grant Publication Full-Text Database; US Patents Full-Text Database; US OCR Full-Text Database; EPO Abstracts Database; JPO Abstracts Database; Derwent World Patents Index; IBM Technical Disclosure Bulletins

Term: L8 and hybridiz$5

Display: 10 **Documents in Display Format:** - **Starting with Number** 1

Generate: ○ Hit List ◉ Hit Count ○ Side by Side ○ Image

Search Clear Interrupt

Search History

DATE: Tuesday, April 13, 2004 Printable Copy Create Case

Set Name side by side	Query	Hit Count	Set Name result set
DB=USPT,EPAB,JPAB,DWPI; PLUR=YES; OP=ADJ			
L9	L8 and hybridiz$5	2	L9
L8	(diagnos$3 or detect$3 or prognostic) same glaucoma same optineurin	4	L8
L7	L6 and optineurin	1	L7
L6	Si.in.	1021	L6
L5	L4 and optineurin	1	L5
L4	Morissette.in.	72	L4
L3	L2 and optineurin	1	L3
L2	L1 and glaucoma	99	L2
L1	Raymond.in.	53126	L1

END OF SEARCH HISTORY

10091281

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=> s glaucoma (P)(hybridz##### or probe# or polymerase chain reaction or PCR)
L1          891 GLAUCOMA (P)(HYBRIDZ##### OR PROBE# OR POLYMERASE CHAIN REACTION
                OR PCR)

=> l1 and (detect### near5 polymorphism)
L1 IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

=> s l1 and (detect###(10a)polymorphism#)
   2 FILES SEARCHED...
L2           19 L1 AND (DETECT###(10A) POLYMORPHISM#)

=>

=> dup rem l2
PROCESSING COMPLETED FOR L2
L3           15 DUP REM L2 (4 DUPLICATES REMOVED)

=> d l3 1-15 bib ab kwic

L3   ANSWER 1 OF 15  CAPLUS  COPYRIGHT 2004 ACS on STN
AN   2004:203627  CAPLUS
DN   140:230534
TI   Detection of genetic polymorphism in inducible nitric
     oxide synthase gene NOS-2 promoter associated with risk of glaucoma
IN   Wadelius, Claes
PA   Insite Vision Incorporated, USA
SO   PCT Int. Appl., 38 pp.
     CODEN: PIXXD2
DT   Patent
LA   English
FAN.CNT 1
     PATENT NO.        KIND  DATE           APPLICATION NO.  DATE
     ---------------   ----  --------       ---------------  --------
PI   WO 2004019877      A2   20040311       WO 2003-US26934  20030828
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
             CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
             GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
             LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM,
             PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN,
             TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY,
             KG, KZ, MD, RU
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG,
             CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC,
             NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
             GW, ML, MR, NE, SN, TD, TG
PRAI US 2002-406993P   P    20020828
AB   The invention relates to detection of polymorphism in
     inducible nitric oxide synthase gene NOS-2 promoter associated with risk of
     glaucoma. Methods of diagnosis of the presence or absence of an
     NOS-2-associated increased or decreased risk of glaucoma are
     described, in which a sample is tested for the presence of certain alleles
     of polymorphisms in the promoter of NOS-2, that are associated with an
     increased risk of glaucoma or with a decreased risk of
     glaucoma. The methods include allele size determination, direct mutation
     anal. by restriction digestion, PCR, nucleic acid hybridization
     and sequence anal. Also described are methods of therapy of
     glaucoma, utilizing NOS-2 therapeutic agents.
TI   Detection of genetic polymorphism in inducible nitric
     oxide synthase gene NOS-2 promoter associated with risk of glaucoma
AB   The invention relates to detection of polymorphism in
     inducible nitric oxide synthase gene NOS-2 promoter associated with risk of
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glaucoma. Methods of diagnosis of the presence or absence of an NOS-2-associated increased or decreased risk of **glaucoma** are described, in which a sample is tested for the presence of certain alleles of polymorphisms in the promoter of NOS-2, that are associated with an increased risk of **glaucoma** or with a decreased risk of **glaucoma**. The methods include allele size determination, direct mutation anal. by restriction digestion, **PCR**, nucleic acid hybridization and sequence anal. Also described are methods of therapy of **glaucoma**, utilizing NOS-2 therapeutic agents.

IT Repetitive DNA
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); BIOL (Biological study); USES (Uses)
((CCTTT)n; **detection** of genetic **polymorphism** in inducible nitric oxide synthase gene NOS-2 promoter associated with risk of glaucoma)

IT Gene, animal
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); BIOL (Biological study); USES (Uses)
(NOS-2; **detection** of genetic **polymorphism** in inducible nitric oxide synthase gene NOS-2 promoter associated with risk of glaucoma)

IT Alleles
(allele size determination, for **detection** of **polymorphism**; **detection** of genetic **polymorphism** in inducible nitric oxide synthase gene NOS-2 promoter associated with risk of glaucoma)

IT Molecular association
(between NOS-2 and nuclear proteins, NOS-2 therapeutic agents altering; **detection** of genetic **polymorphism** in inducible nitric oxide synthase gene NOS-2 promoter associated with risk of glaucoma)

IT Genetic **polymorphism**
Genotyping (method)
Glaucoma (disease)
Haplotypes
Human
(**detection** of genetic **polymorphism** in inducible nitric oxide synthase gene NOS-2 promoter associated with risk of glaucoma)

IT Promoter (genetic element)
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); BIOL (Biological study); USES (Uses)
(**detection** of genetic **polymorphism** in inducible nitric oxide synthase gene NOS-2 promoter associated with risk of glaucoma)

IT Genetic methods
(direct mutation anal. by restriction digestion, for **detection** of **polymorphism**; **detection** of genetic **polymorphism** in inducible nitric oxide synthase gene NOS-2 promoter associated with risk of glaucoma)

IT DNA sequence analysis
Nucleic acid hybridization
PCR (**polymerase chain reaction**)
(for **detection** of **polymorphism**; **detection** of genetic **polymorphism** in inducible nitric oxide synthase gene NOS-2 promoter associated with risk of **glaucoma**)

IT Peptide nucleic acids
Probes (nucleic acid)
RL: ARG (Analytical reagent use); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(for **detection** of **polymorphism**; **detection** of genetic **polymorphism** in inducible nitric oxide synthase gene NOS-2 promoter associated with risk of **glaucoma**)

IT Primers (nucleic acid)
RL: ARG (Analytical reagent use); DGN (Diagnostic use); PRP (Properties); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(for **detection** of **polymorphism**; **detection** of genetic **polymorphism** in inducible nitric oxide synthase gene NOS-2 promoter associated with risk of glaucoma)

IT Diagnosis
(genetic; **detection** of genetic **polymorphism** in inducible nitric oxide synthase gene NOS-2 promoter associated with risk of glaucoma)

IT Glaucoma (disease)
(open-angle glaucoma; **detection** of genetic **polymorphism** in inducible nitric oxide synthase gene NOS-2 promoter associated with risk of glaucoma)

IT 125978-95-2, Nitric oxide synthase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(**detection** of genetic **polymorphism** in inducible nitric oxide synthase gene NOS-2 promoter associated with risk of glaucoma)

L3 ANSWER 2 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:796207 CAPLUS
DN 139:303000
TI Promoter sequences of human optineurin gene and uses in diagnosis of glaucoma
IN Raymond, Vincent; Morissette, Jean; Si, Erwin
PA Can.
SO U.S. Pat. Appl. Publ., 159 pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2003190617	A1	20031009	US 2002-91281	20020306
PRAI	US 2002-91281		20020306		

AB Promoter sequences of the human optineurin gene can be used to diagnose, prognoses, and treat glaucoma and related disorders. Methods, kits, and nucleic acids capable of **detecting** or containing **polymorphisms** located within the promoter region of the optineurin gene are also provided. The promoter sequences can also be used to generate cells, vectors, and nucleic acids useful in a variety of diagnostic and prognostic methods and kits as well as therapeutic compds., compns. and methods.

AB Promoter sequences of the human optineurin gene can be used to diagnose, prognoses, and treat glaucoma and related disorders. Methods, kits, and nucleic acids capable of **detecting** or containing **polymorphisms** located within the promoter region of the optineurin gene are also provided. The promoter sequences can also be used to generate cells, vectors, and nucleic acids useful in a variety of diagnostic and prognostic methods and kits as well as therapeutic compds., compns. and methods.

IT Blood
Blood serum
Body fluid
DNA sequences
Eye, disease
Genetic markers
Glaucoma (disease)
Human
Lymph
Molecular cloning
Nucleic acid amplification (method)
Nucleic acid hybridization
PCR (polymerase chain reaction)
Susceptibility (genetic)
(promoter sequences of human optineurin gene and uses in diagnosis of

glaucoma)

L3 ANSWER 3 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:696397 CAPLUS
DN 139:212357
TI Methods and kits for **detecting** single nucleotide **polymorphisms** in TIGR gene for diagnosis and treatment of glaucoma
IN Huang, Doug Hui
PA USA
SO U.S. Pat. Appl. Publ., 14 pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2003165857	A1	20030904	US 2001-17870	20011212
PRAI	US 2001-17870		20011212		

AB Methods and compns. are described for use in the rapid and simultaneous screening of one or more samples for one or more polymorphisms in the TIGR gene. The methods and compns. of the present invention can be used to rapidly determine if polymorphisms in a gene encoding the TIGR protein are present in the genome of a subject. Identifying which polymorphisms are present in an individual can permit the diagnosis or prediction of the risk of glaucoma in the subject. The TIGR protein polymorphisms include MT-1, T377M, E423K and N480K.

TI Methods and kits for **detecting** single nucleotide **polymorphisms** in TIGR gene for diagnosis and treatment of glaucoma
IT Nucleotides, biological studies
RL: ARG (Analytical reagent use); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(2',3'-dideoxyribo-, triphosphates; methods and kits for **detecting** single nucleotide **polymorphisms** in TIGR gene for diagnosis and treatment of glaucoma)
IT Proteins
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(TIGR gene; methods and kits for **detecting** single nucleotide **polymorphisms** in TIGR gene for diagnosis and treatment of glaucoma)
IT Gene, animal
RL: ANT (Analyte); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(TIGR; methods and kits for **detecting** single nucleotide **polymorphisms** in TIGR gene for diagnosis and treatment of glaucoma)
IT Capillary electrophoresis
Electrophoresis
Fluorometry
Gene therapy
Human
Nucleic acid amplification (method)
PCR (polymerase chain reaction)
Susceptibility (genetic)
Test kits
(methods and kits for **detecting** single nucleotide **polymorphisms** in TIGR gene for diagnosis and treatment of **glaucoma**)
IT **Probes** (nucleic acid)
RL: ARG (Analytical reagent use); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(methods and kits for **detecting** single nucleotide **polymorphisms** in TIGR gene for diagnosis and treatment of

glaucoma)

IT Primers (nucleic acid)
RL: ARG (Analytical reagent use); DGN (Diagnostic use); PRP (Properties); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(methods and kits for **detecting** single nucleotide **polymorphisms** in TIGR gene for diagnosis and treatment of glaucoma)

IT Diagnosis
Epidemiology
(mol.; methods and kits for **detecting** single nucleotide **polymorphisms** in TIGR gene for diagnosis and treatment of glaucoma)

IT DNA sequences
(of TIGR gene of human; methods and kits for **detecting** single nucleotide **polymorphisms** in TIGR gene for diagnosis and treatment of glaucoma)

IT Glaucoma (disease)
(primary open angle; methods and kits for **detecting** single nucleotide **polymorphisms** in TIGR gene for diagnosis and treatment of glaucoma)

IT Mouth
(screening for TIGR gene in; methods and kits for **detecting** single nucleotide **polymorphisms** in TIGR gene for diagnosis and treatment of glaucoma)

IT Genetic **polymorphism**
(single nucleotide; methods and kits for **detecting** single nucleotide **polymorphisms** in TIGR gene for diagnosis and treatment of glaucoma)

IT 611-60-9, DdTTP 24027-80-3, DdATP 66004-77-1, DdCTP 68726-28-3, DdGTP 433935-36-5, Polynucleotide polymerase
RL: ARG (Analytical reagent use); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(methods and kits for **detecting** single nucleotide **polymorphisms** in TIGR gene for diagnosis and treatment of glaucoma)

IT 590449-73-3, DNA (human gene TIGR exon 3)
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(nucleotide sequence; methods and kits for **detecting** single nucleotide **polymorphisms** in TIGR gene for diagnosis and treatment of glaucoma)

IT 590449-65-3 590449-66-4 590449-67-5 590449-68-6 590449-69-7 590449-70-0 590449-71-1 590449-72-2
RL: ARG (Analytical reagent use); DGN (Diagnostic use); PRP (Properties); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(primer sequence; methods and kits for **detecting** single nucleotide **polymorphisms** in TIGR gene for diagnosis and treatment of glaucoma)

IT 590465-74-0 590465-75-1 590465-76-2 590465-77-3
RL: PRP (Properties)
(unclaimed nucleotide sequence; methods and kits for **detecting** single nucleotide **polymorphisms** in TIGR gene for diagnosis and treatment of glaucoma)

L3 ANSWER 4 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:492533 CAPLUS
DN 139:67339
TI Methods to screen and treat individuals with glaucoma or the propensity to develop glaucoma and related SNPs in human TIGR (trabecular meshwork inducible glucocorticoid response) gene promoter region
IN Polansky, Jon
PA USA
SO U.S. Pat. Appl. Publ., 32 pp.
CODEN: USXXCO

DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2003119000	A1	20030626	US 2001-985637	20011105
PRAI	US 2001-985637		20011105		

AB The present invention involves methods and reagents for diagnosing and treating glaucoma and related disorders. Specifically, the invention relates to a method of identifying mutations in the TIGR gene of a glaucomatous patient and treating them with an effective amount of a non-steroidal anti-inflammatory drug. Disclosed are single strand conformational polymorphism (SSCP) in the promoter region of human TIGR (trabecular meshwork inducible glucocorticoid response) gene (also known as the myocillin (MYOC) gene), and related primers. In particular, C4337→G (TIGR mt-1) and T5113→C (TIGR mt-11) of the provided TIGR promoter fragment (SEQ ID NO:1) are used as markers for the diagnosis of glaucomas. The effect of IOP disease treatment with diclofenac for patients with background of TIGR mt-1 and/or mt-11 mutation(s) are evaluated. Addnl. the invention allows the identification of individuals at risk for progressive increases in intraocular pressure, which is a risk factor for glaucoma; the invention thus also allows the identification of individuals among ocular hypertensive/glaucoma suspect groups at increased risk of visual field loss.

IT Nucleic acid amplification (method)
(for TIGR **polymorphism detection**; methods to screen and treat individuals with glaucoma or the propensity to develop glaucoma and related SNPs in human TIGR gene promoter region)

IT Primers (nucleic acid)
Probes (nucleic acid)
RL: ARG (Analytical reagent use); DGN (Diagnostic use); PRP (Properties); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(for TIGR promoter SSCP; methods to screen and treat individuals with **glaucoma** or the propensity to develop **glaucoma** and related SNPs in human TIGR gene promoter region)

IT 9075-08-5, Restriction endonuclease
RL: BUU (Biological use, unclassified); DGN (Diagnostic use); BIOL (Biological study); USES (Uses)
(for TIGR **polymorphism detection**; methods to screen and treat individuals with glaucoma or the propensity to develop glaucoma and related SNPs in human TIGR gene promoter region)

L3 ANSWER 5 OF 15 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 2003:518125 BIOSIS
DN PREV200300512383
TI OPTINEURIN GENE POLYMORPHISMS IN JAPANESE GLAUCOMA PATIENTS AND NORMAL INDIVIDUALS.
AU Umeda, T. [Reprint Author]; Matsuo, T. [Reprint Author]; Tanabe, Y. [Reprint Author]; Nagayama, M. [Reprint Author]; Tamura, N. [Reprint Author]; Ohtsuki, H. [Reprint Author]
CS Ophthalmology, Okayama Univ Grad Sch Med Dent, Okayama, Japan
SO ARVO Annual Meeting Abstract Search and Program Planner, (2003) Vol. 2003, pp. Abstract No. 1111. cd-rom.
Meeting Info.: Annual Meeting of the Association for Research in Vision and Ophthalmology. Fort Lauderdale, FL, USA. May 04-08, 2003. Association for Research in Vision and Ophthalmology.
DT Conference; (Meeting)
Conference; (Meeting Poster)
Conference; Abstract; (Meeting Abstract)
LA English
ED Entered STN: 5 Nov 2003
Last Updated on STN: 5 Nov 2003
AB Purpose: Optineurin mutations have been recently identified as responsible for the GLC1E locus of open angle **glaucoma** (Science2002;295:1077-

9). This study aimed at **detecting** mutations and **polymorphisms** of optineurin gene (OPTN) in Japanese patients with various types of **glaucoma** as well as in normal Japanese individuals. Methods: The exons 4, 5, 6, and 16 of OPTN in 149 patients with various types of **glaucoma** and 43 normal individuals were amplified by **polymerase chain reaction** from genomic DNA of peripheral blood leukocytes and then submitted to direct sequencing. Included in the study were 67 patients with primary open angle **glaucoma** (POAG), 27 with normal tension **glaucoma** (NTG), 21 with secondary **glaucoma** (SG), 8 with capsular **glaucoma** (CapG), 9 with congenital **glaucoma** (ConG), 12 with primary angle-closure **glaucoma** (PACG), 4 with ocular hypertension (OH), and one with Chandler syndrome. Results: The reported heterozygous mutations, 458G>A(Glu50Lys) in exon 4 and 691_692insAG in exon 6 were not found in any **glaucoma** patients or normal individuals. The reported 603T>A(Met98Lys) in exon 5 was found in 9(13.4%) POAG, 2(7.4%) NTG, 3(14.2%) SG, one(12.5%) CapG, one(8.3%) PACG patients, and 4(9.3%) normal individuals. The reported 1944G>A(Arg545Gln) in exon 16 was found in 3(4.4%) POAG, one(3.7%) NTG, 2(9.5%) SG, 2(25.0%) CapG, one(8.3%) PACG patients, and 3(6.9%) normal individuals. In addition, a heterozygous change, 412G>A(Thr34Thr) in exon 4 was found in 18(26.8%) POAG, 4(14.8%) NTG, 4(19.0%) SG, 2(25.0%) CapG, 3(33.3%) ConG, 3(25.0%) PACG patients, and 6(13.9%) normal individuals. Another heterozygous change, 457C>T(Thr49Thr) in exon 4 was found only in 3(4.4%) POAG patients. Conclusions: The reported OPTN mutations were found as polymorphisms both in Japanese **glaucoma** patients and normal individuals. This population may harbor different types of OPTN polymorphisms as compared to the initial report.

AB Purpose: Optineurin mutations have been recently identified as responsible for the GLC1E locus of open angle **glaucoma** (Science2002;295:1077-9). This study aimed at **detecting** mutations and **polymorphisms** of optineurin gene (OPTN) in Japanese patients with various types of **glaucoma** as well as in normal Japanese individuals. Methods: The exons 4, 5, 6, and 16 of OPTN in 149 patients with various types of **glaucoma** and 43 normal individuals were amplified by **polymerase chain reaction** from genomic DNA of peripheral blood leukocytes and then submitted to direct sequencing. Included in the study were 67 patients with primary open angle **glaucoma** (POAG), 27 with normal tension **glaucoma** (NTG), 21 with secondary **glaucoma** (SG), 8 with capsular **glaucoma** (CapG), 9 with congenital **glaucoma** (ConG), 12 with primary angle-closure **glaucoma** (PACG), 4 with ocular hypertension (OH), and one with Chandler syndrome. Results: The reported heterozygous mutations, 458G>A(Glu50Lys) in exon 4 and 691_692insAG in exon 6 were not found in any **glaucoma** patients or normal individuals. The reported 603T>A(Met98Lys) in exon 5 was found in 9(13.4%) POAG, 2(7.4%) NTG, 3(14.2%) SG, one(12.5%). . . 4 was found only in 3(4.4%) POAG patients. Conclusions: The reported OPTN mutations were found as polymorphisms both in Japanese **glaucoma** patients and normal individuals. This population may harbor different types of OPTN polymorphisms as compared to the initial report.

L3 ANSWER 6 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:977591 CAPLUS
DN 138:53908
TI Diagnostics and therapeutics for glaucoma, retinal degenerative diseases and cardiovascular diseases based on the analysis of mRNA and protein expression profile of myocilin gene
IN Kong, Tim Hing
PA USA
SO PCT Int. Appl., 52 pp.
CODEN: PIXXD2
DT Patent
LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002102300	A2	20021227	WO 2001-US45645	20011101
	W: AU, CN, JP, US				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
PRAI	US 2000-252420P	P	20001122		
	US 2001-281422P	P	20010405		
	US 2001-306889P	P	20010723		

AB Genetic profiling methodologies for the prognosis and/or diagnosis of Glaucoma, Retinal degenerative diseases or cardiovascular diseases. and their uses thereof in screening assays for the identification of therapeutics and the evaluation of their effectiveness for treating Glaucoma, Retinal degenerative diseases or cardiovascular diseases in a subject are described. Described are protein and cDNA sequences and various deletions of myocilin (myoc) gene (also known as Trabecular meshwork Inducible Glucocorticoid Responsive protein - TIGR gene) genetically linked to above diseases.

IT **PCR (polymerase chain reaction)**
(RACE, for human myoc gene expression profiling; diagnostics and therapeutics for **glaucoma**, retinal degenerative diseases and cardiovascular diseases based on anal. of mRNA and protein expression profile of myocilin gene)

IT **PCR (polymerase chain reaction)**
(RT-**PCR** (reverse transcription-**PCR**), for human myoc gene expression profiling; diagnostics and therapeutics for **glaucoma**, retinal degenerative diseases and cardiovascular diseases based on anal. of mRNA and protein expression profile of myocilin gene)

IT **PCR (polymerase chain reaction)**
(anchor, for human myoc gene expression profiling; diagnostics and therapeutics for **glaucoma**, retinal degenerative diseases and cardiovascular diseases based on anal. of mRNA and protein expression profile of myocilin gene)

IT Dot blot hybridization
Immunoassay
Northern blot hybridization
PCR (polymerase chain reaction)
Reverse transcription
(for human myoc gene expression profiling; diagnostics and therapeutics for **glaucoma**, retinal degenerative diseases and cardiovascular diseases based on anal. of mRNA and protein expression profile of myocilin gene)

IT **Probes** (nucleic acid)
RL: ARG (Analytical reagent use); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(for human myoc gene expression profiling; diagnostics and therapeutics for **glaucoma**, retinal degenerative diseases and cardiovascular diseases based on anal. of mRNA and protein expression profile of myocilin gene)

IT Genetic **polymorphism**
(single nucleotide, **detection** in human myoc gene; diagnostics and therapeutics for glaucoma, retinal degenerative diseases and cardiovascular diseases based on anal. of mRNA and protein expression profile of myocilin gene)

L3 ANSWER 7 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:444418 CAPLUS
DN 137:15798
TI Human GLC1A gene and uses for glaucoma therapeutics and diagnostics
IN Stone, Edwin M.; Sheffield, Val C.; Alward, Wallace L. M.; Fingert, John
PA University of Iowa Research Foundation, USA
SO U.S., 67 pp., Cont.-in-part of U.S. Ser. No. 822,999.

CODEN: USXXAM
DT Patent
LA English
FAN.CNT 5

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6403307	B1	20020611	US 1998-56285	19980407
	US 6271026	B1	20010807	US 1997-822999	19970321
	CA 2324378	AA	19991014	CA 1999-2324378	19990407
	WO 9951779	A2	19991014	WO 1999-US7671	19990407
	WO 9951779	A3	19991229		
	W: AU, BR, CA, JP, MX				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	AU 9934798	A1	19991025	AU 1999-34798	19990407
	EP 1070143	A2	20010124	EP 1999-916488	19990407
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	JP 2002510508	T2	20020409	JP 2000-542490	19990407
	US 2003077587	A1	20030424	US 2001-952464	20010912
PRAI	US 1997-822999	A2	19970321		
	US 1994-234218	A2	19940428		
	US 1996-748479	A2	19961108		
	US 1997-791347	A2	19970130		
	US 1998-56285	A	19980407		
	WO 1999-US7671	W	19990407		
	US 1999-366952	B1	19990804		
	US 1999-473273	B1	19991228		

AB The invention provides protein and genomic sequences of human GLC1A gene that encodes a functional protein specifically modulating bioactivity of a myocilin. The invention also provides primers and **probes** for **detection** mutations or **polymorphisms** on the GLC1A gene that is mapped on human chromosome 1q21-q31. SSCP screening followed by sequencing of DNA from 1312 unrelated individuals revealed a total of 33 GLC1A sequence changes. Sequencing of the entire GLC1A coding region amplified from the probands of three families with 1q-linked **glaucoma**, but without SSCP shifts revealed three addnl. sequence changes. The invention further provides methods and compns. for diagnosis, preventing and treating **glaucoma**.

RE.CNT 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

AB The invention provides protein and genomic sequences of human GLC1A gene that encodes a functional protein specifically modulating bioactivity of a myocilin. The invention also provides primers and **probes** for **detection** mutations or **polymorphisms** on the GLC1A gene that is mapped on human chromosome 1q21-q31. SSCP screening followed by sequencing of DNA from 1312 unrelated individuals revealed a total of 33 GLC1A sequence changes. Sequencing of the entire GLC1A coding region amplified from the probands of three families with 1q-linked **glaucoma**, but without SSCP shifts revealed three addnl. sequence changes. The invention further provides methods and compns. for diagnosis, preventing and treating **glaucoma**.

ST human GLC1A gene mutation polymorphism **glaucoma** diagnosis primer **probe**

IT DNA sequence analysis
SSCP (single-strand conformation **polymorphism**)
(for **detecting polymorphism** on GLC1A gene; human GLC1A gene and uses for glaucoma therapeutics and diagnostics)

IT **Probes** (nucleic acid)
RL: ARG (Analytical reagent use); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(human GLC1A gene and uses for **glaucoma** therapeutics and diagnostics)

L3 ANSWER 8 OF 15 MEDLINE on STN DUPLICATE 1
AN 2002311349 MEDLINE
DN PubMed ID: 12036985
TI Molecular genetics of primary congenital glaucoma in Brazil.
AU Stoilov Ivaylo R; Costa Vital P; Vasconcellos Jose P C; Melo Monica B; Betinjane Alberto J; Carani Jose C E; Oltrogge Ernst V; Sarfarazi Mansoor
CS Molecular Ophthalmic Genetics Laboratory, Surgical Research Center, Department of Surgery, University of Connecticut Health Center, Farmington, Connecticut CT 06030-1110, USA.
NC EY-11095 (NEI)
M01RR-06192 (NCRR)
SO Investigative ophthalmology & visual science, (2002 Jun) 43 (6) 1820-7.
Journal code: 7703701. ISSN: 0146-0404.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
OS OMIM-231300; OMIM-601771
EM 200206
ED Entered STN: 20020611
Last Updated on STN: 20020623
Entered Medline: 20020621
AB PURPOSE: To determine the distribution of CYP1B1 gene mutations in Brazilian patients with primary congenital **glaucoma** (PCG).
METHODS: PCG diagnosis was established by presence of buphthalmos in at least one affected eye and associated high intraocular pressures before the age of 3 years. CYP1B1 mutation screening of 52 patients with PCG was performed by SSCP and direct sequencing of **PCR** fragments.
RESULTS: Eleven mutations, four of which are novel, were observed in 26 (50%) individuals. A new frameshift mutation (4340delG) was observed in 20.2% of all individuals screened. These individuals had early-onset, bilateral **glaucoma** that necessitated multiple surgical interventions. CYP1B1 mutations were twice as frequent in affected individuals of European descent as in individuals of African descent. Analysis of six intragenic single nucleotide polymorphisms (SNPs) established 5'-C-C-G-G-T-A-3' as the most common haplotype among the affected Brazilian individuals. A nonsense mutation (W57X) previously reported in an individual with Peters anomaly (compound heterozygote) was also observed in two individuals with PCG but combined with different mutations. A newly developed SSCP assay enabled us to **detect** all DNA mutations and **polymorphisms** previously **detected** by direct sequencing. CONCLUSIONS: Our results indicate that CYP1B1 mutations may be responsible for half of cases of PCG in the Brazilian population. The SNP haplotype 5'-C-C-G-G-T-A-3' was associated with the majority of CYP1B1 mutations. This haplotype harbors the high-activity V432 allele, which is emerging as a putative susceptibility factor in several cancers.
AB PURPOSE: To determine the distribution of CYP1B1 gene mutations in Brazilian patients with primary congenital **glaucoma** (PCG).
METHODS: PCG diagnosis was established by presence of buphthalmos in at least one affected eye and associated high intraocular. . . age of 3 years. CYP1B1 mutation screening of 52 patients with PCG was performed by SSCP and direct sequencing of **PCR** fragments. RESULTS: Eleven mutations, four of which are novel, were observed in 26 (50%) individuals. A new frameshift mutation (4340delG) was observed in 20.2% of all individuals screened. These individuals had early-onset, bilateral **glaucoma** that necessitated multiple surgical interventions.
CYP1B1 mutations were twice as frequent in affected individuals of European descent as in individuals. . . also observed in two individuals with PCG but combined with different mutations. A newly developed SSCP assay enabled us to **detect** all DNA mutations and **polymorphisms** previously **detected** by direct sequencing.
CONCLUSIONS: Our results indicate that CYP1B1 mutations may be responsible

for half of cases of PCG in. . .

L3 ANSWER 9 OF 15 MEDLINE on STN
AN 2002128561 MEDLINE
DN PubMed ID: 11864415
TI Diagnostic and differential diagnostic potential of mitochondrial DNA assessment in patients with Leber's hereditary optic neuropathy.
AU Feng X; Pu W; Gao D
CS Department of Ophthalmology, Second Affiliated Hospital, China Medical University, Shenyang 110004, China.
SO [Zhonghua yan ke za zhi] Chinese journal of ophthalmology, (2001 May) 37 (3) 174-7.
Journal code: 16210540R. ISSN: 0412-4081.
CY China
DT Journal; Article; (JOURNAL ARTICLE)
LA Chinese
FS Priority Journals
EM 200310
ED Entered STN: 20020227
Last Updated on STN: 20021211
Entered Medline: 20031008
AB OBJECTIVE: To study the primary mutations of mitochondrial DNA (mtDNA) associated with Leber's hereditary optic neuropathy (LHON) in patients with optic neuropathy. METHODS: Seventy-nine patients with a variety of bilateral optic neuropathy were examined. Mutations at np 3,460, np 11,778 and np 14,484 of mtDNA were tested by **PCR**-restriction fragment length **polymorphism** technique to **detect** DNA in peripheral blood. The samples were taken from 16 cases of clinically diagnosed LHON, 44 cases of suspected LHON, two cases of alcohol amblyopia, four cases of multiple sclerosis, five cases of autosomal dominant hereditary optic atrophy, 4 cases with primary open-angle **glaucoma**, three cases of spinocerebellar degeneration, and one case of ethambutol-induced optic neuropathy. RESULTS: The mutation at np 11,778 was identified in 31 cases (39.2%), consisting of all the 16 clinically diagnosed LHON cases, thirteen cases (29.5%) of the suspected LHON, and the two cases of alcohol amblyopia. The remaining 48 cases were negative for mtDNA mutations at np 3,460, np 11,778, or np 14,484. CONCLUSION: Assessment of mtDNA provides a useful diagnostic aid in confirming and excluding the diagnosis of LHON, particularly useful in cases without a family hereditary history and cases with cause unknown bilateral optic neuritis.
AB . . . of bilateral optic neuropathy were examined. Mutations at np 3,460, np 11,778 and np 14,484 of mtDNA were tested by **PCR** -restriction fragment length **polymorphism** technique to **detect** DNA in peripheral blood. The samples were taken from 16 cases of clinically diagnosed LHON, 44 cases of suspected LHON,. . . alcohol amblyopia, four cases of multiple sclerosis, five cases of autosomal dominant hereditary optic atrophy, 4 cases with primary open-angle **glaucoma**, three cases of spinocerebellar degeneration, and one case of ethambutol-induced optic neuropathy. RESULTS: The mutation at np 11,778 was identified. . .

L3 ANSWER 10 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2000:493711 CAPLUS
DN 133:118534
TI Diagnosis, prognosis and treatment of glaucoma and related disorders and steroid sensitivity using polymorphisms in the TIGR gene and its promoter region
IN Nguyen, Thai D.; Polansky, Jon R.; Chen, Pu; Chen, Hua
PA The Regents of the University of California, USA
SO PCT Int. Appl., 122 pp.
CODEN: PIXXD2
DT Patent
LA English

FAN.CNT 4

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000042220	A1	20000720	WO 2000-US559	20000111
	W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	US 6475724	B1	20021105	US 1999-306828	19990507
	CA 2359335	AA	20000720	CA 2000-2359335	20000111
	EP 1141386	A1	20011010	EP 2000-904272	20000111
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	JP 2002534135	T2	20021015	JP 2000-593777	20000111
PRAI	US 1999-227881	A	19990111		
	US 1999-306828	A	19990507		
	US 1997-791154	B2	19970128		
	US 1997-938669	A2	19970926		
	WO 2000-US559	W	20000111		

AB Polymorphisms in the upstream sequences of the TIGR (trabecular meshwork-induced glucocorticoid response) protein encoding sequence can be used to diagnose a sensitivity to steroids and a risk for glaucoma or ocular hypertensive disorders. Methods, kits, and nucleic acids containing polymorphisms, base substitutions, or base addns. located within the upstream region and within protein-encoding regions of the TIGR gene are also provided. The upstream sequences disclosed, including the TIGR promoter regions and those regions possessing functional characteristics associated with or possessed by the TIGR gene 5' regulatory region, can also be used to generate cells, vectors, and nucleic acid constructs useful in a variety of diagnostic and prognostic methods and kits as well as therapeutic compds., compns. and methods. Gene therapy using antisense oligonucleotides and method of detecting specific binding of mols. to TIGR gene via gel shift assay are also described. Detection of SSCPs in the TIGR genes of glaucoma patients was demonstrated.

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

IT Primers (nucleic acid)
Probes (nucleic acid)
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
(for **detection** of **polymorphism** in TIGR gene; diagnosis, prognosis and treatment of **glaucoma** and related disorders and steroid sensitivity using polymorphisms in TIGR gene and promoter region)

IT 211043-62-8 211043-63-9 211043-64-0 211043-65-1 211043-66-2
211043-67-3 211043-69-5 211043-73-1 211043-83-3 211043-85-5
211043-86-6 211043-87-7 211043-88-8 211043-89-9 211043-90-2
211043-91-3 211043-92-4 211043-93-5 211043-94-6 211043-95-7
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
(**probe**; diagnosis, prognosis and treatment of **glaucoma** and related disorders and steroid sensitivity using polymorphisms in TIGR gene and promoter region)

L3 ANSWER 11 OF 15 MEDLINE on STN DUPLICATE 2
AN 2000256512 MEDLINE
DN PubMed ID: 10798654

TI Truncations in the TIGR gene in individuals with and without primary open-angle glaucoma.

AU Lam D S; Leung Y F; Chua J K; Baum L; Fan D S; Choy K W; Pang C P
CS Department of Ophthalmology and Visual Sciences, the Chinese University of Hong Kong, Kowloon.

SO Investigative ophthalmology & visual science, (2000 May) 41 (6) 1386-91. Journal code: 7703701. ISSN: 0146-0404.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200005
ED Entered STN: 20000525
Last Updated on STN: 20000525
Entered Medline: 20000515

AB PURPOSE: To investigate the coding exons in the trabecular meshwork-induced glucocorticoid response protein (TIGR) gene for mutations in primary open-angle **glaucoma** (POAG) in Chinese subjects. METHODS: Ninety-one Chinese patients with POAG and 113 of their family members without **glaucoma** were screened for sequence alterations in the TIGR gene by **polymerase chain reaction**, conformation-sensitive gel electrophoresis, and DNA sequencing. One hundred thirty-two unrelated individuals without **glaucoma**, aged 50 years or more, were studied as control subjects. RESULTS: Five sequence variants that lead to amino acid changes were identified. One was novel: Arg91Stop in one patient with POAG. Four had been reported: Arg46Stop in subjects with and without POAG, including an unaffected 77-year-old woman homozygous for Arg46Stop; Gly12Arg in subjects without **glaucoma**; and Asp208Glu and Thr353Ile in subjects with and without POAG. The previously reported 1-83(G-->A) and Arg76Lys **polymorphisms** were **detected** in both patients and controls and always occurred together. CONCLUSIONS: A different pattern of TIGR sequence variants exists in the Chinese than in non-Chinese populations. No common TIGR mutation that causes POAG was found. The occurrence of subjects without **glaucoma** who are heterozygous or homozygous for Arg46Stop suggests that reduction in the amount of TIGR protein does not cause **glaucoma**. Thus, the TIGR missense mutations known to cause POAG probably do not cause **glaucoma** by inactivating a normal TIGR function, but rather through the gain of a pathologic function.

AB . . . PURPOSE: To investigate the coding exons in the trabecular meshwork-induced glucocorticoid response protein (TIGR) gene for mutations in primary open-angle **glaucoma** (POAG) in Chinese subjects. METHODS: Ninety-one Chinese patients with POAG and 113 of their family members without **glaucoma** were screened for sequence alterations in the TIGR gene by **polymerase chain reaction**, conformation-sensitive gel electrophoresis, and DNA sequencing. One hundred thirty-two unrelated individuals without **glaucoma**, aged 50 years or more, were studied as control subjects. RESULTS: Five sequence variants that lead to amino acid changes. . . reported: Arg46Stop in subjects with and without POAG, including an unaffected 77-year-old woman homozygous for Arg46Stop; Gly12Arg in subjects without **glaucoma**; and Asp208Glu and Thr353Ile in subjects with and without POAG. The previously reported 1-83(G-->A) and Arg76Lys **polymorphisms** were **detected** in both patients and controls and always occurred together. CONCLUSIONS: A different pattern of TIGR sequence variants exists in the Chinese than in non-Chinese populations. No common TIGR mutation that causes POAG was found. The occurrence of subjects without **glaucoma** who are heterozygous or homozygous for Arg46Stop suggests that reduction in the amount of TIGR protein does not cause **glaucoma**. Thus, the TIGR missense mutations known to cause POAG probably do not cause **glaucoma** by inactivating a normal TIGR function, but rather through the gain of a pathologic function.

L3 ANSWER 12 OF 15 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 2000:368771 BIOSIS
DN PREV200000368771
TI Screening for the primary congenital **glaucoma** CYP1B1 mutation among Hungarian Gypsies by **PCR**-RFLP.
AU Tordai, Attila [Reprint author]; Kalmar, L. [Reprint author]; Andrikovics, H. [Reprint author]; Bors, A. [Reprint author]; Furedi, S.; Varadi, A.
CS National Inst. Hematology, Budapest, Hungary
SO European Journal of Human Genetics, (June, 2000) Vol. 8, No. Supplement 1, pp. 169. print.
Meeting Info.: European Human Genetics Conference 2000. Amsterdam, Netherlands. May 27-February 30, 2000. European Society of Human Genetics.
ISSN: 1018-4813.
DT Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
Conference; (Meeting Poster)
LA English
ED Entered STN: 30 Aug 2000
Last Updated on STN: 8 Jan 2002
TI Screening for the primary congenital **glaucoma** CYP1B1 mutation among Hungarian Gypsies by **PCR**-RFLP.
IT . . .
PCR [polymerase chain reaction]: DNA amplification method, in-situ recombinant gene expression detection, sequencing techniques; PCR-RFLP [polymerase chain reaction-restriction fragment length **polymorphism**]: analytical method, **detection** method; genotype screening: diagnostic method
IT Miscellaneous Descriptors
Meeting Abstract; Meeting Poster

L3 ANSWER 13 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1999:691237 CAPLUS
DN 131:335412
TI Novel mutations in the human FREAC3 gene for diagnosis and prognósis of glaucoma and anterior segment dysgenesis
IN Walter, Michael A.; Jordan, Tim; Raymond, Vincent
PA University of Alberta, Can.
SO PCT Int. Appl., 66 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9954493	A2	19991028	WO 1999-IB1024	19990416
	WO 9954493	A3	19991223		
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	CA 2325663	AA	19991028	CA 1999-2325663	19990416
	AU 9938432	A1	19991108	AU 1999-38432	19990416
	AU 767718	B2	20031120		
	EP 1071823	A2	20010131	EP 1999-921090	19990416
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	JP 2002512041	T2	20020423	JP 2000-544821	19990416
	US 2003013087	A1	20030116	US 1999-292862	19990416
	NZ 507787	A	20030829	NZ 1999-507787	19990416

ZA 2000005707 A 20010612 ZA 2000-5707 20001016
PRAI US 1998-82206P P 19980417
US 1998-84784P P 19980508
WO 1999-IB1024 W 19990416

AB The invention features novel mutations in the human FREAC3 gene, which is a member of the forkhead/winged-helix transcription factor gene family. Missense mutations comprise a G-to-C transversion at coding nucleotide 245, which results in a Ser82Thr mutation in helix 1 of the FREAC3 forkhead domain, or the missense mutation may be a G-to-C mutation at coding nucleotide 261, which results in an Ile87Met mutation in the helix 1. A frameshift mutation results in a 10-bp deletion of coding nucleotides 93 through 102 and the formation of a truncated protein. Identification of these mutations provides methods for early diagnosis of glaucoma, other disorders of the eye, and heart defects. Also provided are cells having at least one deficient FREAC3 gene. Such cells may be used to detect therapeutic compds. that mimic FREAC3, are agonists of FREAC3, or otherwise modulate the level of FREAC3 biol. activity. The diagnostic assays include detecting the loss of a recognition site for a restriction endonuclease (e.g., AluI) or the gain of a recognition site (e.g., BspHI), or mismatch **detection** using single strand conformational **polymorphism** (SSCP) anal. or restriction fragment length polymorphism (RFLP) anal. In addition, primers for the amplification and detection of mutations are claimed from Table 1, but the Table is not provided in the document. Antibodies specific for mutant or nonmutant forms of the protein products may also be used in diagnostic immunoassays.

AB The invention features novel mutations in the human FREAC3 gene, which is a member of the forkhead/winged-helix transcription factor gene family. Missense mutations comprise a G-to-C transversion at coding nucleotide 245, which results in a Ser82Thr mutation in helix 1 of the FREAC3 forkhead domain, or the missense mutation may be a G-to-C mutation at coding nucleotide 261, which results in an Ile87Met mutation in the helix 1. A frameshift mutation results in a 10-bp deletion of coding nucleotides 93 through 102 and the formation of a truncated protein. Identification of these mutations provides methods for early diagnosis of glaucoma, other disorders of the eye, and heart defects. Also provided are cells having at least one deficient FREAC3 gene. Such cells may be used to detect therapeutic compds. that mimic FREAC3, are agonists of FREAC3, or otherwise modulate the level of FREAC3 biol. activity. The diagnostic assays include detecting the loss of a recognition site for a restriction endonuclease (e.g., AluI) or the gain of a recognition site (e.g., BspHI), or mismatch **detection** using single strand conformational **polymorphism** (SSCP) anal. or restriction fragment length polymorphism (RFLP) anal. In addition, primers for the amplification and detection of mutations are claimed from Table 1, but the Table is not provided in the document. Antibodies specific for mutant or nonmutant forms of the protein products may also be used in diagnostic immunoassays.

IT Drug screening
Eye, disease
Gene therapy
Glaucoma (disease)
Heart, disease
Immunoassay
Molecular cloning
Mutation
PCR (polymerase chain reaction)
Prognosis
Protein sequences
RFLP (restriction fragment length polymorphism)
SSCP (single-strand conformation polymorphism)
Susceptibility (genetic)
Transformation, genetic
cDNA sequences
(mutations in the human FREAC3 gene for diagnosis and prognosis of **glaucoma** and anterior segment dysgenesis)

L3 ANSWER 14 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1998:527423 CAPLUS
DN 129:160245
TI Methods for the diagnosis, prognosis and treatment of glaucoma and related disorders using polymorphisms in the TIGR gene and its promoter region
IN Nguyen, Thai D.; Polansky, Jon R.; Chen, Pu; Chen, Hua
PA The Regents of the University of California, USA
SO PCT Int. Appl., 106 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 4

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9832850	A1	19980730	WO 1998-US468	19980109
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	US 6171788	B1	20010109	US 1997-938669	19970926
	AU 9858204	A1	19980818	AU 1998-58204	19980109
	AU 742405	B2	20020103		
	EP 1012271	A1	20000628	EP 1998-901761	19980109
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	NZ 336860	A	20010629	NZ 1998-336860	19980109
	JP 2001509669	T2	20010724	JP 1998-532017	19980109
	NO 9903653	A	19990928	NO 1999-3653	19990727
	MX 9906976	A	20000228	MX 1999-6976	19990727
PRAI	US 1997-791154	A	19970128		
	US 1997-938669	A	19970926		
	WO 1998-US468	W	19980109		

AB Polymorphisms in the promoter and exons of the TIGR gene can be used in the diagnosis and prognosis of glaucoma. Detection of SSCPs in the TIGR genes of glaucoma patients is demonstrated. These markers may also be used to diagnose steroid sensitivity in glaucoma patients.
RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT
IT Primers (nucleic acid)
Probes (nucleic acid)
RL: ARG (Analytical reagent use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(for **detection** of **polymorphism** in TIGR gene; methods for diagnosis, prognosis and treatment of **glaucoma** and related disorders using polymorphisms in TIGR gene and its promoter region)
IT 211043-62-8 211043-63-9 211043-64-0 211043-65-1 211043-66-2
211043-67-3 211043-69-5 211043-73-1 211043-83-3 211043-85-5
211043-86-6 211043-87-7 211043-88-8 211043-89-9 211043-90-2
211043-91-3 211043-92-4 211043-93-5 211043-94-6 211043-95-7
RL: ARG (Analytical reagent use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(primer for **detection** of **polymorphism** in TIGR gene; methods for diagnosis, prognosis and treatment of glaucoma and related disorders using polymorphisms in TIGR gene and its promoter region)

L3 ANSWER 15 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1998:398440 CAPLUS
DN 129:50486

TI Methods for diagnosing glaucoma and discovering anti-glaucoma drugs
IN Clark, Abbot F.; Wordinger, Robert J.
PA Clark, Abbot F., USA; Wordinger, Robert J.
SO PCT Int. Appl., 8 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9824932	A1	19980611	WO 1997-US21054	19971114
	W: AU, CA, JP, MX, US				
	RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	AU 9852617	A1	19980629	AU 1998-52617	19971114
	AU 728438	B2	20010111		
	EP 943014	A1	19990922	EP 1997-947569	19971114
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	JP 2001505434	T2	20010424	JP 1998-525606	19971114
	US 2002042050	A1	20020411	US 1999-308295	19990517
PRAI	US 1996-33227P	P	19961205		
	WO 1997-US21054	W	19971114		

AB Cultured human trabecular meshwork cells lines derived from glaucomatous donors express mRNA for glucocorticoid receptor in the alternate splicing isoform β (GRβ) as well as the normal α isoform. **Glaucoma** diagnosis may be performed by detecting aberrant GRβ expression or defects in the GR gene causing GRβ formation. The GR gene defects may be **detected** by RFLP (restriction fragment length **polymorphism**), SSCP (single-strand conformation **polymorphism**), **PCR** (**polymerase chain reaction**), denaturing gradient gel electrophoresis, allele-specific oligonucleotide ligation, and allele-specific hybridization. Methods for **glaucoma** diagnosis may involve either detection of genetic changes inside or outside the GR gene leading to altered GRβ expression. Anti- **glaucoma** therapeutic agents may be assessed by their interaction with GRβ or their effects on GRβ expression.

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

AB Cultured human trabecular meshwork cells lines derived from glaucomatous donors express mRNA for glucocorticoid receptor in the alternate splicing isoform β (GRβ) as well as the normal α isoform. **Glaucoma** diagnosis may be performed by detecting aberrant GRβ expression or defects in the GR gene causing GRβ formation. The GR gene defects may be **detected** by RFLP (restriction fragment length **polymorphism**), SSCP (single-strand conformation **polymorphism**), **PCR** (**polymerase chain reaction**), denaturing gradient gel electrophoresis, allele-specific oligonucleotide ligation, and allele-specific hybridization. Methods for **glaucoma** diagnosis may involve either detection of genetic changes inside or outside the GR gene leading to altered GRβ expression. Anti- **glaucoma** therapeutic agents may be assessed by their interaction with GRβ or their effects on GRβ expression.

IT Antiglaucoma agents
Denaturing gradient gel electrophoresis
Drug screening
Glaucoma (disease)
PCR (**polymerase chain reaction**)
RFLP (restriction fragment length polymorphism)
SSCP (single-strand conformation polymorphism)
(methods for diagnosing **glaucoma** and discovering anti-**glaucoma** drugs)